



TYPE-R SUBWOOFER

HAUT-PARLEUR D'EXTRÊMES GRAVES TYPE-R

APPLICATION GUIDE

GUIDE D' APPLICATION

SWR-1542D

15 Inch Dual Voice Coil Subwoofer (4 Ω)+(4 Ω)
Haut-parleur d'extrêmes graves à double bobine 15 po (4 Ω)+(4 Ω)

SWR-1522D

15 Inch Dual Voice Coil Subwoofer (2 Ω)+(2 Ω)
Haut-parleur d'extrêmes graves à double bobine 15 po (2 Ω)+(2 Ω)

SWR-1242D

12 Inch Dual Voice Coil Subwoofer (4 Ω)+(4 Ω)
Haut-parleur d'extrêmes graves à double bobine 12 po (4 Ω)+(4 Ω)

SWR-1222D

12 Inch Dual Voice Coil Subwoofer (2 Ω)+(2 Ω)
Haut-parleur d'extrêmes graves à double bobine 12 po (2 Ω)+(2 Ω)

SWR-1042D

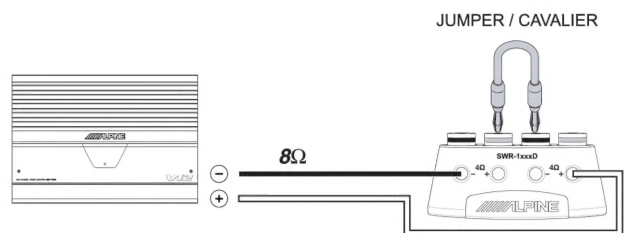
10 Inch Dual Voice Coil Subwoofer (4 Ω)+(4 Ω)
Haut-parleur d'extrêmes graves à double bobine 10 po (4 Ω)+(4 Ω)

SWR-1022D

10 Inch Dual Voice Coil Subwoofer (2 Ω)+(2 Ω)
Haut-parleur d'extrêmes graves à double bobine 10 po (2 Ω)+(2 Ω)

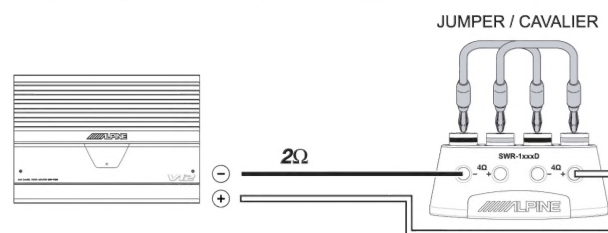
Example 1 One Amplifier and One Subwoofer

Exemple 1 1 amplificateur et 1 h.-p. d'extrêmes graves



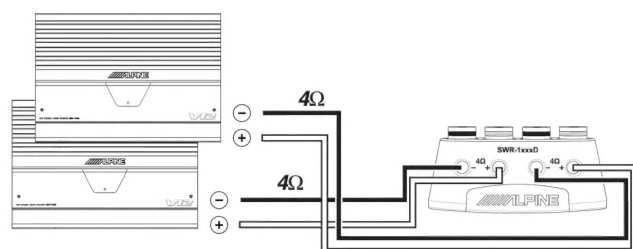
Example 2 One Amplifier and One Subwoofer

Exemple 2 1 amplificateur et 1 h.-p. d'extrêmes graves



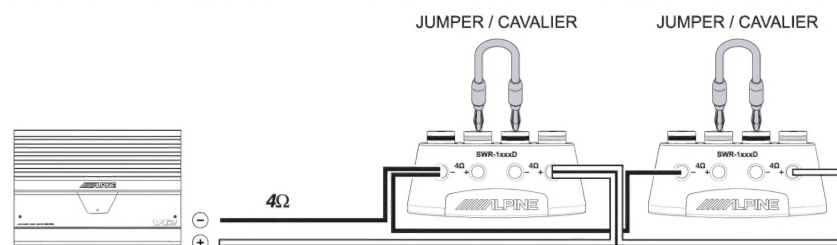
Example 3 Two Amplifiers and One Subwoofer

Exemple 3 2 amplificateurs et 1 h.-p. d'extrêmes graves



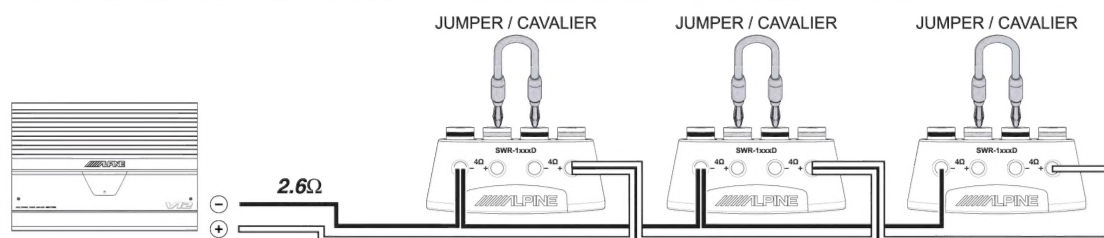
Example 4 One Amplifier and Two Subwoofers

Exemple 4 1 amplificateur et 2 h.-p. d'extrêmes graves



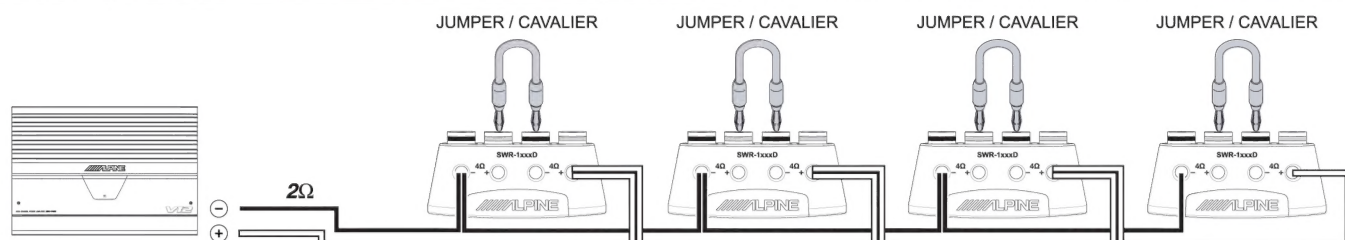
Example 5 One Amplifier and Three Subwoofers

Exemple 5 1 amplificateur et 3 h.-p. d'extrêmes graves



Example 6 One Amplifier and Four Subwoofers

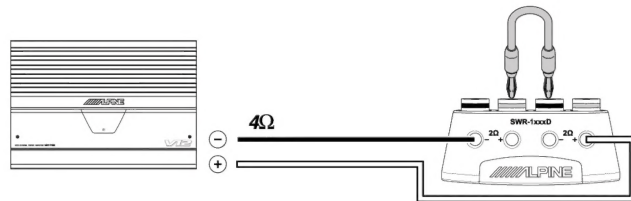
Exemple 6 amplificateur et 4 h.-p. d'extrêmes graves



Example 1 One Amplifier and One Subwoofer

Exemple 1 1 amplificateur et 1 h.-p. d'extrêmes graves

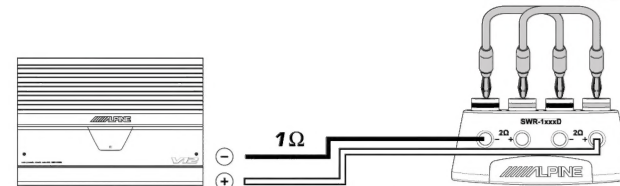
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Example 2 One Amplifier and One Subwoofer

Exemple 2 1 amplificateur et 1 h.-p. d'extrêmes graves

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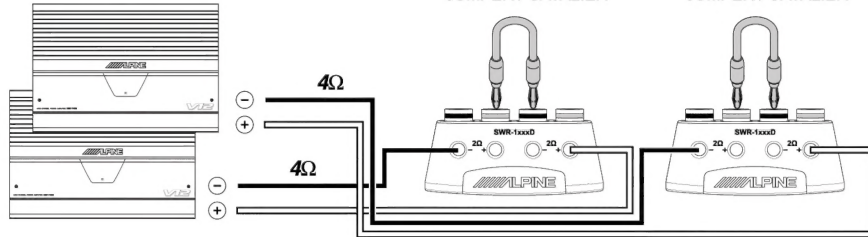
**Caution ! Consult amplifier owner's manual for 1Ω connection.
Attention : lire le manuel de l'amplificateur pour la connexion à 1Ω .**

Example 3 Two Amplifiers and Two Subwoofers

Exemple 3 2 amplificateurs et 2 h.-p. d'extrêmes graves

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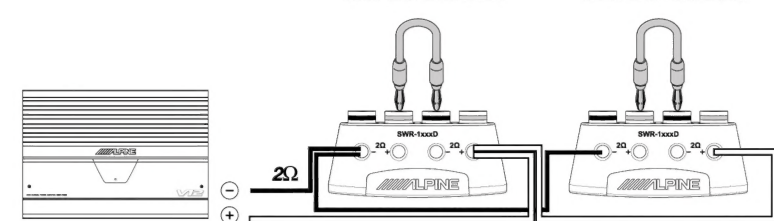


Example 4 One Amplifier and Two Subwoofers

Exemple 4 1 amplificateur et 2 h.-p. d'extrêmes graves

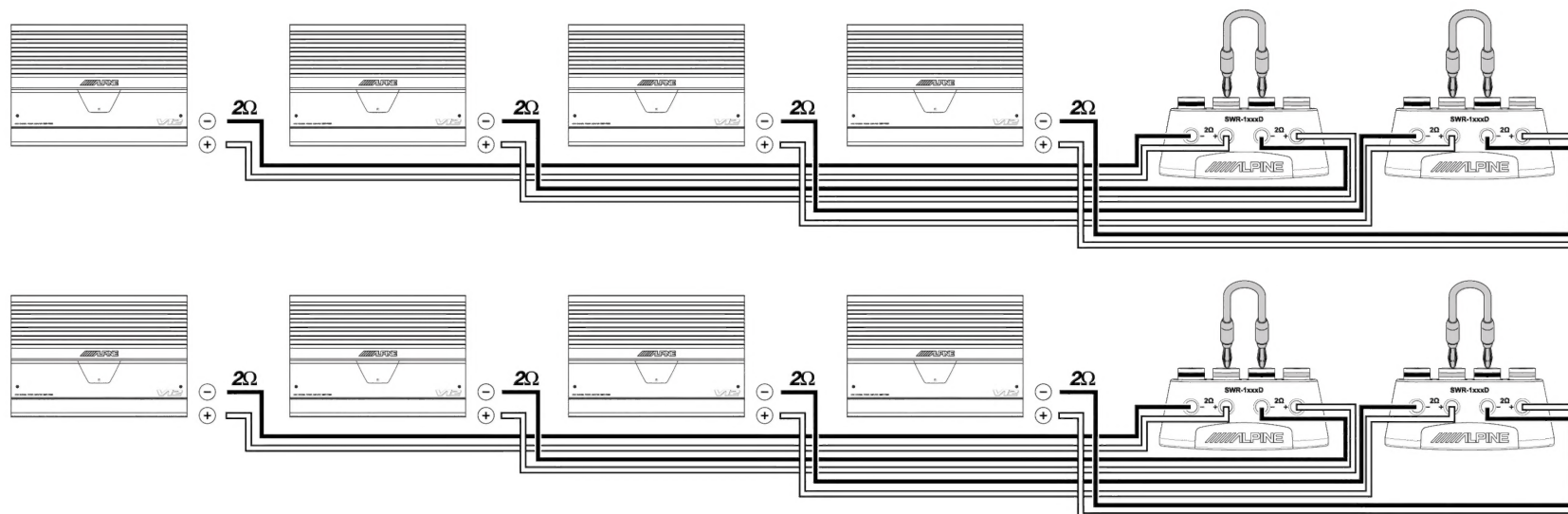
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Example 5 Eight Amplifiers and Four Subwoofers-Competition Diagram

Exemple 5 8 amplificateurs et 4 h.-p. d'extrêmes graves - schéma de compétition



Subwoofer Features and Specifications	
Features	
Size	
Power Handling (RMS/peak)	
Power Range (RMS)	
Frequency Response	
Diaphragm	Material
	Design
Surround	Material
	Design
Spider	Material
	Design
Voice Coil	Material
	Design
Motor Structure	Pole Geometry
	Configuration
Frame	Material
	Design
Terminals	Layout
	Design
Tinsel Leads	Design
	Design
Gasket	
Enclosure Information	
Mounting Depth	
Mounting Diameter - Front Mount	
Displacement - Front Mount**	
Added Volume - Reverse Mount (magnet out)**	
Recommended Enclosure Alignments	
Sealed Box Volume Range (Gross)	
Optimum Sealed Box	External Box Dimensions
	Gross Internal Volume
	Net Internal Volume**
	F _s , Q _{ts}
Vented Box Volume Range (Gross)	
Optimum Vented Box	External Box Dimensions
	Gross Internal Volume
	Vent Area (dimensions)
	Vent Length
	Vent Displacement
	Net Internal Volume (V _b)**
	F _s , ripple, F _s
Electro-Mechanical Parameters [#]	
Nominal Impedance	
Frequency Response	
Sensitivity (SPL@1W/1m)*	
D.C Coil Resistance (Re)	
Inductance (Le) 1kHz/20kHz	
Free Air Resonance (Fs)	
Equivalent Stiffness (Vas)	
Mechanical Q (Qms)	
Electrical Q (Qes)	
Total Q (Qts)	
Linear Excursion [(Hvc-Hag)/2], One-Way (Xmax)	
Magnetic Linear Excursion, One-Way (Xmag)	
Mechanical Excursion, Peak-to-Peak	
Gap Height (Hag)	
Coil Height (Hvc)	
Cone Area (Sd)	
Voice Coil Diameter	
Magnet Weight	

Type-R					
SWR-1022D	SWR-1042D	SWR-1222D	SWR-1242D	SWR-1522D	SWR-1542D
10"	10"	12"	12"	15"	15"
500W/1500W	500W/1500W	500W/1500W	500W/1500W	750W/2000W	750W/2000W
200W-500W	200W-500W	200W-500W	200W-500W	400W-750W	400W-750W
24Hz-600kHz	26Hz-600Hz	23Hz-500Hz	25Hz-500Hz	18Hz-400Hz	20Hz-400Hz
Kevlar Reinforced Pulp Fiber					
2-piece Structural Parabolic					
Injection Molded Santoprene®					
High Amplitude Multi-Roll					
Nomex®					
Mirrored Progressive					
180°C High Temp Wire on Spiral Cut Aluminum Former					
4-Layer Dual Voice Coil					
Compound Radius Curve (Patent #6,639,993)					
Radial Vented VC Heat Sink and Airflow Management System (Pat. Pending)					
Cast Aluminum					
Perimeter Vented Heat Transfer (Pat. Pending)					
One Side					
Heavy Duty 8ga. Push with Housing, Banana Plug Jumper					
Reinforced Layer Spider Integration (Patent #6,810,988)					
Concealed Mount Gasket System					
172 mm (6.8")	172 mm (6.8")	195 mm (7.7")	195 mm (7.7")	234 mm (9.2")	234 mm (9.2")
231 mm (9.1")	231 mm (9.1")	275 mm (10.9")	275 mm (10.9")	349 mm (13.8")	349 mm (13.8")
0.050 ft ³	0.050 ft ³	0.071 ft ³	0.071 ft ³	0.123 ft ³	0.123 ft ³
0.055 ft ³	0.055 ft ³	0.085 ft ³	0.085 ft ³	0.160 ft ³	0.160 ft ³
Sealed, Vented, Bandpass					
0.5-0.8 ft ³	0.5-0.8 ft ³	0.7-1.0 ft ³	0.7-1.0 ft ³	1.3-2.5 ft ³	1.3-2.5 ft ³
11.5" x 11.5" x 12.75"	11.5" x 11.5" x 12.75"	13" x 13" x 12.5"	13" x 13" x 12.5"	16.5" x 16.5" x 15"	16.5" x 16.5" x 15"
0.65 ft ³	0.65 ft ³	0.85 ft ³	0.85 ft ³	1.75 ft ³	1.75 ft ³
0.6 ft ³	0.6 ft ³	0.78 ft ³	0.78 ft ³	1.625 ft ³	1.625 ft ³
49Hz, 0.65	48Hz, 0.69	51Hz, 0.67	49Hz, 0.7	43Hz, 0.64	44Hz, 0.65
0.6-1.25 ft ³	0.6-1.25 ft ³	0.75-1.75 ft ³	0.75-1.75 ft ³	1.5-3.0 ft ³	1.5-3.0 ft ³
12.5" x 14.5" x 17.25"	12.5" x 14.5" x 17.25"	18" x 13.5" x 16.5"	18" x 13.5" x 16.5"	19.5" x 16.5" x 20"	19.5" x 16.5" x 20"
1.3 ft ³	1.3 ft ³	1.7 ft ³	1.7 ft ³	2.9 ft ³	2.9 ft ³
11 in ² (11" x 1")	11 in ² (11" x 1")	15 in ² (12" x 1.25")	15 in ² (12" x 1.25")	22.5 in ² (15" x 1.5")	22.5 in ² (15" x 1.5")
22 in.	22 in.	22.75 in.	22.75 in.	27 in.	27 in.
0.237 ft ³	0.237 ft ³	0.305 ft ³	0.305 ft ³	0.51 ft ³	0.51 ft ³
1 ft ³	1 ft ³	1.3 ft ³	1.3 ft ³	2.25 ft ³	2.25 ft ³
30 Hz, 2.8 dB, 35 Hz	30 Hz, 3.5 dB, 36 Hz	33 Hz, 2 dB, 36 Hz	33 Hz, 2.5 dB, 36 Hz	27 Hz, 2.7 dB, 30 Hz	29 Hz, 2.4 dB, 30 Hz
2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
24 - 600Hz	26 - 600Hz	23 - 500Hz	25 - 500Hz	18 - 400Hz	20 - 400Hz
83 dB	83 dB	85 dB	85 dB	87 dB	87 dB
1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.6Ω+1.6Ω	3.45Ω+3.45Ω
2.48mH / 1.06mH	3.94mH / 1.63mH	2.35mH / 1.01mH	3.71mH / 1.67mH	2.53mH / 0.99mH	4.17mH / 1.64mH
31Hz	33Hz	28Hz	29Hz	22Hz	23Hz
20L (0.71 ft ³)	20L (0.71 ft ³)	45L (1.6 ft ³)	45L (1.6 ft ³)	100L (3.53 ft ³)	100L (3.53 ft ³)
8.67	7.92	8.25	7.89	8.57	7.71
0.53	0.57	0.44	0.50	0.43	0.48
0.50	0.53	0.42	0.47	0.41	0.45
18.1 mm	18.2 mm	18.1 mm	18.2 mm	20.7mm	20.5 mm
19.6 mm	19.6 mm	19.4 mm	19.4 mm	21.4 mm	21.5 mm
60 mm	60 mm	65 mm	65 mm	70 mm	70 mm
10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
46.1 mm	46.4 mm	46.1 mm	46.4 mm	51.3 mm	51.0 mm
332 cm ²	332cm ²	480 cm ²	480 cm ²	775 cm ²	775 cm ²
50 mm (2")	50 mm (2")	50 mm (2")	50 mm (2")	65 mm (2.6")	65 mm (2.6")
85 oz	85 oz	109 oz	109 oz	155 oz	155 oz

Note: All specifications are subject to change without notice

[#] All T/S parameters measured/calculated with voice coils connected in series, after break-in.

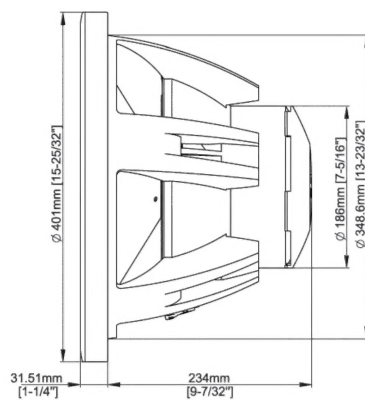
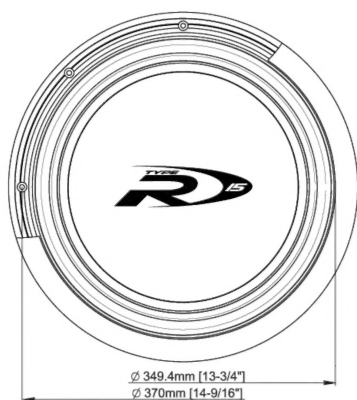
* This commonly misunderstood specification should not be used as a reference for subwoofer output capability.

** Based upon 3/4" (19mm) baffle thickness, with opening cut approximately to gasket inner diameter

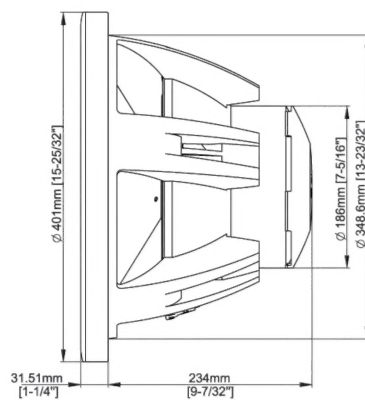
Caractéristiques et spécifications		Type-R					
Caractéristiques		SWR-1022D	SWR-1042D	SWR-1222D	SWR-1242D	SWR-1522D	SWR-1542D
Features							
Taille		10"	10"	12"	12"	15"	15"
Puissance admissible (efficace/de crête)		500W/1500W	500W/1500W	500W/1500W	500W/1500W	750W/2000W	750W/2000W
Plage de puissance (efficace)		200W-500W	200W-500W	200W-500W	200W-500W	400W-750W	400W-750W
Réponse en fréquence (Hz)		24Hz-600Hz	26Hz-600Hz	23Hz-500Hz	25Hz-500Hz	18Hz-400Hz	20Hz-400Hz
Membrane	Matériau	Pâte renforcée de Kevlar					
	Conception	2 pièces parabolique					
Suspension	Matériau	Santoprene ^{MD} injecté					
	Conception	Multibourrelets à amplitude élevée					
Centreur	Matériau	Nomex ^{MD}					
	Conception	Centreur double progressif Nomex ^{MD}					
Bobine	Matériau	Fil résistant jusqu'à 180°C sur forme d'aluminium à sillon hélicoïdal					
	Conception	4 couches, double bobine					
Moteur	Géométrie de pièce polaire	Courbe complexe (brevet n° 6,639,993)					
	Configuration	Bobine à dissipateur thermique à ventilation radiale et gestion du flux d'air (brevet en instance)					
Bâti	Matériau	Cast Aluminum					
	Conception	Bâti à transfert thermique et ventilation périmétrique (brevet en instance)					
Bornes	Répartition	Un côté					
	Conception	Solide, calibre 8, à pression avec boîtier, cavalier à fiche banane					
Fils conducteurs	Conception	Intégrés au centreur, couche renforcée (brevet n° 6,810,988)					
Joint d'étanchéité	Conception	Joint d'étanchéité couvre-vis					
Enceinte							
Profondeur de montage		172 mm (6.8 po)	172 mm (6.8 po)	195 mm (7.7 po)	195 mm (7.7 po)	234 mm (9.2 po)	234 mm (9.2 po)
Diamètre de montage - montage avant		231 mm (9.1 po)	231 mm (9.1 po)	275 mm (10.9 po)	275 mm (10.9 po)	349 mm (13.8 po)	349 mm (13.8 po)
Déplacement - montage avant**		0.050 pi ³	0.050 pi ³	0.071 pi ³	0.071 pi ³	0.123 pi ³	0.123 pi ³
Volume ajouté - montage inversé**		0.055 pi ³	0.055 pi ³	0.085 pi ³	0.085 pi ³	0.160 pi ³	0.160 pi ³
Types d'enceintes recommandés		close, évent, passe-bande					
Volume d'enceinte close (brut)		0.5-0.8 pi ³	0.5-0.8 pi ³	0.7-1.0 pi ³	0.7-1.0 pi ³	1.3-2.5 pi ³	1.3-2.5 pi ³
Enceinte close optimale	Dimensions extérieures	11.5 po x 11.5 po x 12.75 po	11.5 po x 11.5 po x 12.75 po	13 po x 13 po x 12.5 po	13 po x 13 po x 12.5 po	16.5 po x 16.5 po x 15 po	16.5 po x 16.5 po x 15 po
	Volume intérieur brut	0.65 pi ³	0.65 pi ³	0.85 pi ³	0.85 pi ³	1.75 pi ³	1.75 pi ³
	Volume intérieur net***	0.6 pi ³	0.6 pi ³	0.78 pi ³	0.78 pi ³	1.625 pi ³	1.625 pi ³
	F _s , Q _{tc}	49Hz, 0.65	48Hz, 0.69	51Hz, 0.67	49Hz, 0.7	43Hz, 0.64	44Hz, 0.65
Volume d'enceinte à évent (brut)		0.6-1.25 pi ³	0.6-1.25 pi ³	0.75-1.75 pi ³	0.75-1.75 pi ³	1.5-3.0 pi ³	1.5-3.0 pi ³
Enceinte à évent optimale	Dimensions extérieures	12.5 po x 14.5 po x 17.25 po	12.5 po x 14.5 po x 17.25 po	18 po x 13.5 po x 16.5 po	18 po x 13.5 po x 16.5 po	19.5 po x 16.5 po x 20 po	19.5 po x 16.5 po x 20 po
	Volume intérieur brut	1.3 pi ³	1.3 pi ³	1.7 pi ³	1.7 pi ³	2.9 pi ³	2.9 pi ³
	Aire de l'évent (dimensions)	11 in ² (11 po x 1 po)	11 in ² (11 po x 1 po)	15 in ² (12 po x 1.25 po)	15 in ² (12 po x 1.25 po)	22.5 in ² (15 po x 1.5 po)	22.5 in ² (15 po x 1.5 po)
	Longueur de l'évent	22 in.	22 in.	22.75 in.	22.75 in.	27 in.	27 in.
	Déplacement de l'évent	0.237 pi ³	0.237 pi ³	0.305 pi ³	0.305 pi ³	0.51 pi ³	0.51 pi ³
	Volume intérieur net (V _i)***	1 pi ³	1 pi ³	1.3 pi ³	1.3 pi ³	2.25 pi ³	2.25 pi ³
F _s , crête, F _o		30 Hz, 2.8 dB, 35 Hz	30 Hz, 3.5 dB, 36 Hz	33 Hz, 2 dB, 36 Hz	33 Hz, 2.5 dB, 36 Hz	27 Hz, 2.7 dB, 30 Hz	29 Hz, 2.4 dB, 30 Hz
Paramètres électromécaniques [#]							
Impédance nominale		2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω	2Ω+2Ω	4Ω+4Ω
Réponse en fréquence		24 - 600Hz	26 - 600Hz	23 - 500Hz	25 - 500Hz	18 - 400Hz	20 - 400Hz
Sensibilité (NPA @ 1 W / 1 m)*		83 dB	83 dB	85 dB	85 dB	87 dB	87 dB
Résistance CC de la bobine (Re)		1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.85Ω+1.85Ω	3.7Ω+3.7Ω	1.6Ω+1.6Ω	3.45Ω+3.45Ω
Inductance (Le) 1 kHz / 20 kHz		2.48mH / 1.06mH	3.94mH / 1.63mH	2.35mH / 1.01mH	3.71mH / 1.67mH	2.53mH / 0.99mH	4.17mH / 1.64mH
Résonance à l'air libre (Fs)		31Hz	33Hz	28Hz	29Hz	22Hz	23Hz
Raideur équivalente (Vas)		20L (0.71 pi ³)	20L (0.71 pi ³)	45L (1.6 pi ³)	45L (1.6 pi ³)	100L (3.53 pi ³)	100L (3.53 pi ³)
Q mécanique (Qms)		8.67	7.92	8.25	7.89	8.57	7.71
Q électrique (Qes)		0.53	0.57	0.44	0.50	0.43	0.48
Q total (Qts)		0.50	0.53	0.42	0.47	0.41	0.45
Déplacement linéaire [(Hvc-Hag)/2], un sens (Xmax)		18.1 mm	18.2 mm	18.1 mm	18.2 mm	20.7mm	20.5 mm
Déplacement linéaire magnétique, un sens (Xmag)		19.6 mm	19.6 mm	19.4 mm	19.4 mm	21.4 mm	21.5 mm
Déplacement mécanique, crête à crête		60 mm	60 mm	65 mm	65 mm	70 mm	70 mm
Hauteur de récartement (Hag)		10 mm	10 mm	10 mm	10 mm	10 mm	10 mm
Hauteur de la bobine (Hvc)		46.1 mm	46.4 mm	46.1 mm	46.4 mm	51.3 mm	51.0 mm
Surface du diaphragme (Sd)		332 cm ²	332 cm ²	480 cm ²	480 cm ²	775 cm ²	775 cm ²
Diamètre de la bobine		50 mm (2 po)	50 mm (2 po)	50 mm (2 po)	50 mm (2 po)	65 mm (2.6 po)	65 mm (2.6 po)
Poids de l'aimant		85 oz	85 oz	109 oz	109 oz	155 oz	155 oz

Notes:

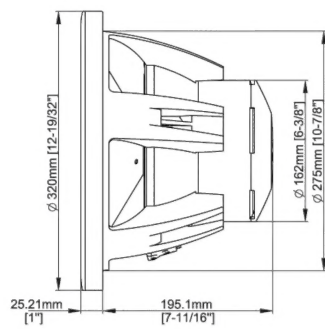
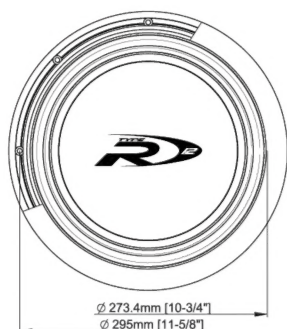
- Remarque : Les spécifications peuvent changer sans préavis.
- # Paramètres T/S mesurés/calculés avec bobines reliées en série, après rodage.
- * Ne pas utiliser cette spécification souvent mal comprise comme référence pour la puissance du haut-parleur d'extrêmes graves.
- ** Panneau de 0,75 po (19 mm) d'épaisseur, ouverture correspondant environ au diamètre intérieur du joint d'étanchéité.



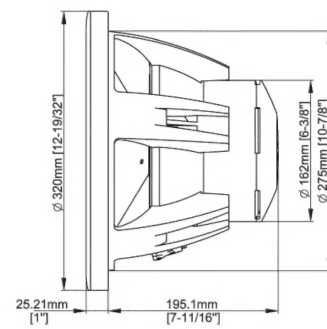
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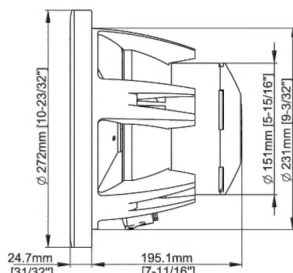
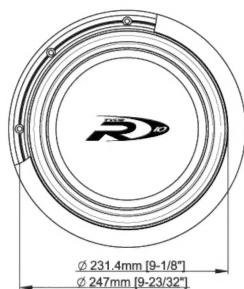
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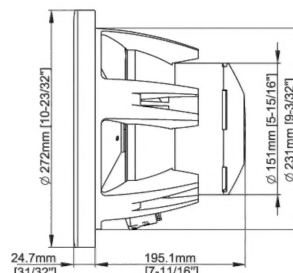
SWR-1242D



SWR-1222D



SWR-1042D



SWR-1022D



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